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Amend.* rotation in a stator frame, a rotor mounted against rotation on the rotor shaft, and a stator arranged around the rotor and fixed to the stator frame, wherein the stator is comprised of an inside cylinder arranged around the rotor to define an air gap between confronting surfaces of them, teeth arranged spaced circumferentially on the inside cylinder to form sequential slots, an outside cylinder surrounding around tooth tips of the teeth, at least two systems of stator windings either concentrated-wound or distributed-wound with a preselected slot span, one of which is low power windings each containing a small number of turns while another of which is high power windings each containing a large number of turns, and terminal lines having terminals connected to any preselected low power and high power windings.

a 2 7. (Amended) A generator constructed as defined in claim 1, wherein the stator windings concentrated-wound or distributed-wound around a field pole corresponding to any pole of the rotor are shunt from series connections into parallel connections as an rpm of the rotor increases, thus regulating a generated voltage.

a 3 12. (Amended) A generator with diverse power-generation characteristics, comprising a rotor supported for rotation in a stator frame and having mounted with permanent magnets of multiple poles, and a stator arranged around the rotor and fixed to the stator frame, wherein the stator is composed of a stator core having radially outwardly extending teeth spaced circumferentially about the stator core to form sequential slots and confronting an outer periphery of the rotor to define an air gap between them, and at least two windings wound spanning across the slots, the windings being each

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grouped into at least two winding sets that are divided circumferentially with a slot span on the stator core to be independent of one another, the windings belonging to each winding set being wound displaced in slot circumferentially 120 electrical degrees apart to form a three-phase system of windings, and wherein terminals are distributed uniformly over an inside circumference of the stator such that the windings in a 2nd winding set are arranged in the stator slots so as to overlap with a 1st winding set in waveform of emf, while a 3rd winding set overlaps with the 1st set and the 2nd set in waveform of emf, and a controller unit for changing over connections to vary the number of turns in the windings connected in series to the terminals in every winding set, thereby giving electric power at different voltages.

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16. (Amended) A generator constructed as defined in claim 12, wherein terminals of the windings in the winding sets are selectively connected in either series or parallel by the controller unit, whereby a low tension induced in the windings of the winding sets is applied to automotive electric systems, whereas a high tension is applied to either energize the heaters incorporated in diesel particulate filters equipped on automotive vehicles or drive auxiliaries mounted on the vehicles.

17. (Amended) A generator constructed as defined in claim 12, wherein the windings for high tension are divided into three winding sets, the terminals of the windings are selectively connected either in series or in parallel by the controller unit, and the windings for low tension are wound in a continued over the whole periphery of the stator to produce